

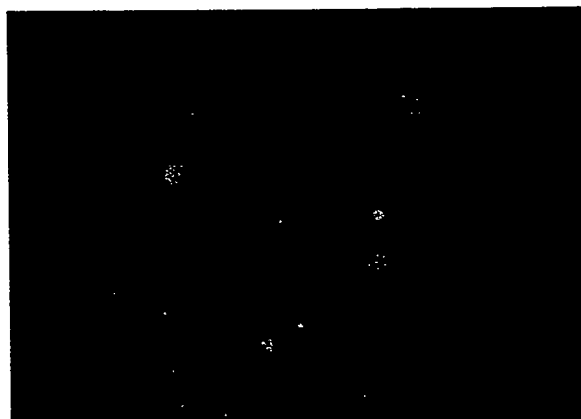
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Figure 1 – Immunofluorescence staining for Fc $\alpha$ R in primary human cell cultures of OA and RA synovial fibroblasts.

Osteoarthritis

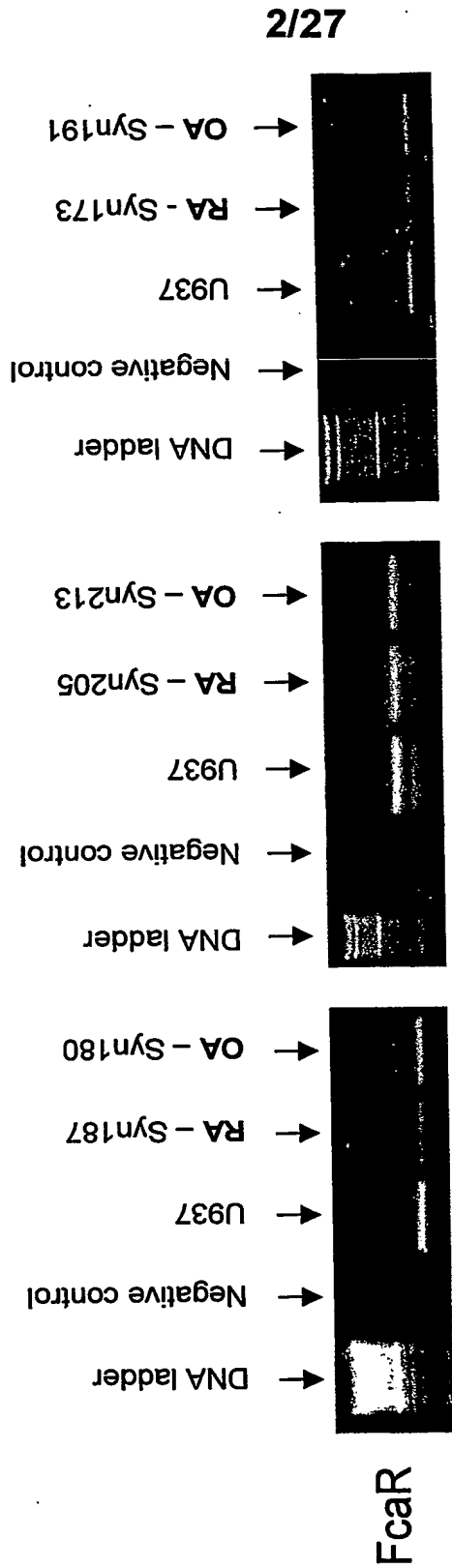


Rheumatoid arthritis



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**Figure 2 - Synovial fibroblasts from patients with rheumatoid arthritis (RA) and osteoarthritis (OA) express Fc-alpha receptor mRNA by RT-PCR (U937 myelomonocytic cell line was used as a positive control.)**

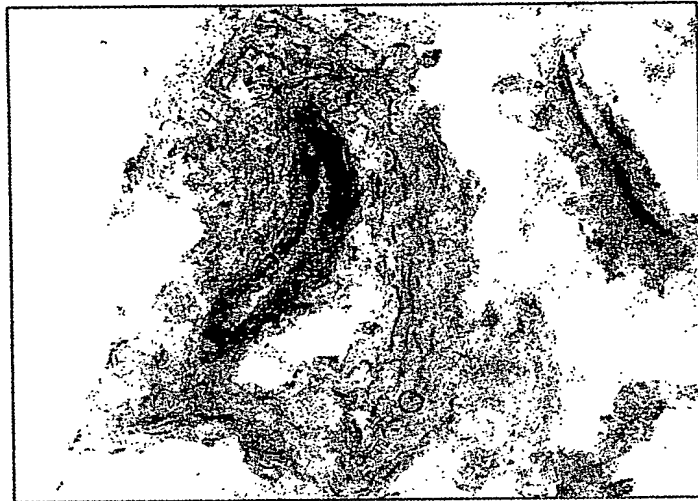


(Primary cultures of synovial fibroblasts from 3 different patients with RA and 3 with OA.)

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Figure 3 - Synovial tissue from patients with RA or OA express Fc $\alpha$ R in synovial cells and endothelial cells

Rheumatoid  
arthritis



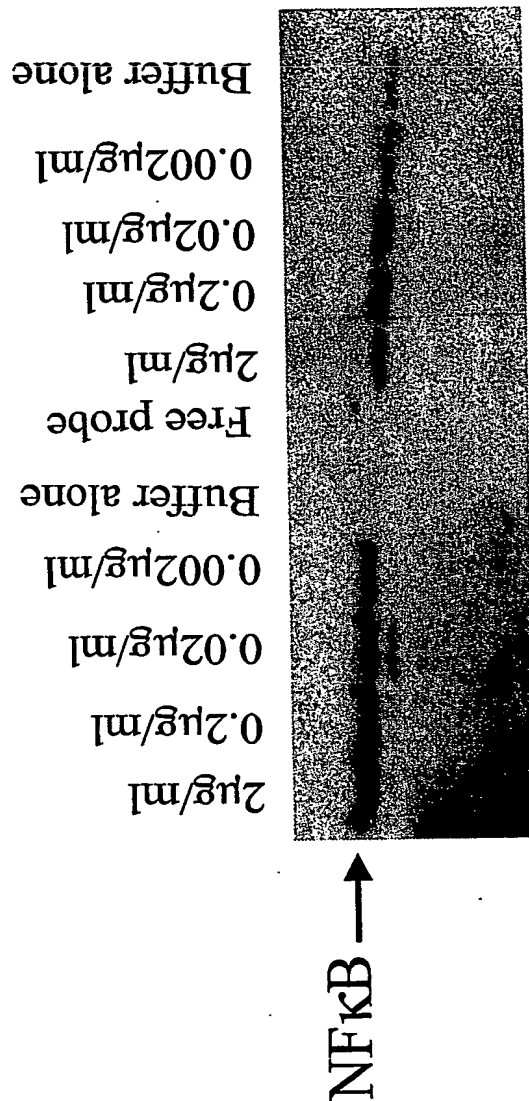
Osteoarthritis



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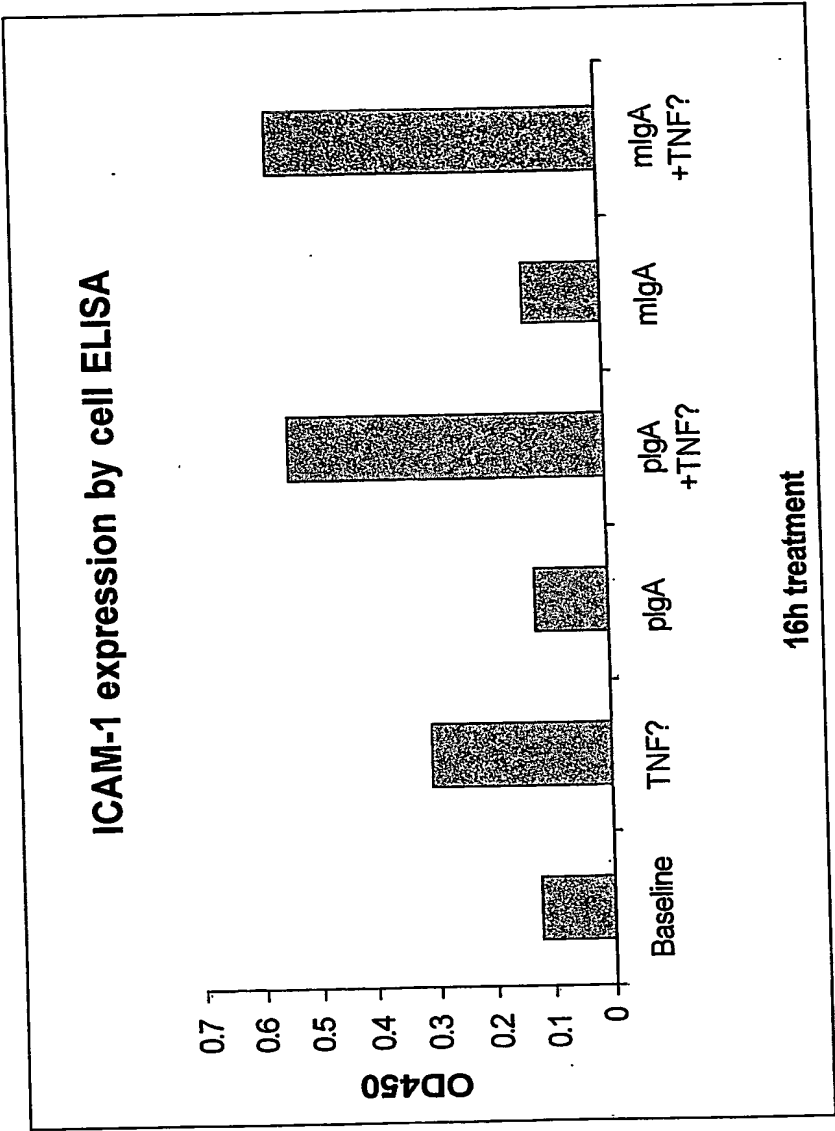
**Figure 4 - pIgA Increases NFκB Activity in Synovial Fibroblasts in a Dose-Response Manner**

**Rheumatoid Arthritis      Osteoarthritis**



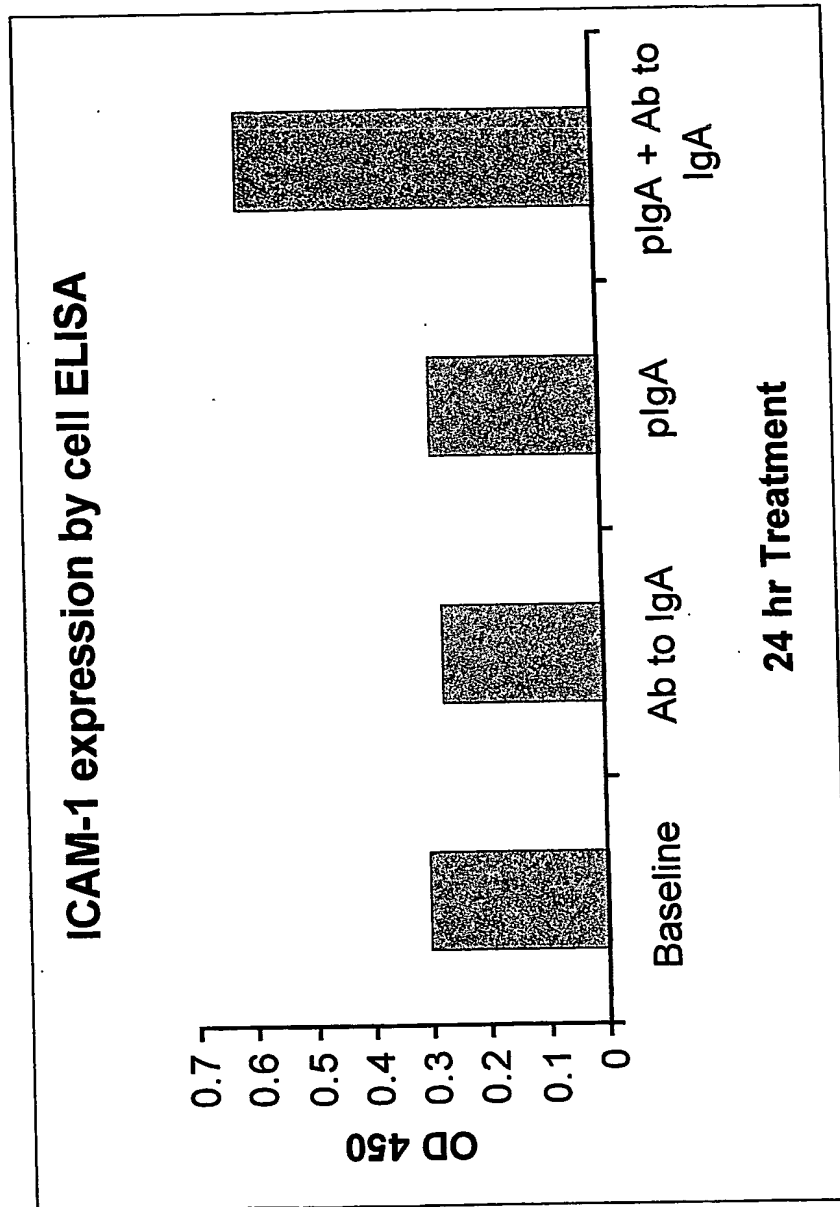
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Figure 5A - IgA increases TNF $\alpha$ -induced ICAM-1 expression on RA synovial fibroblasts



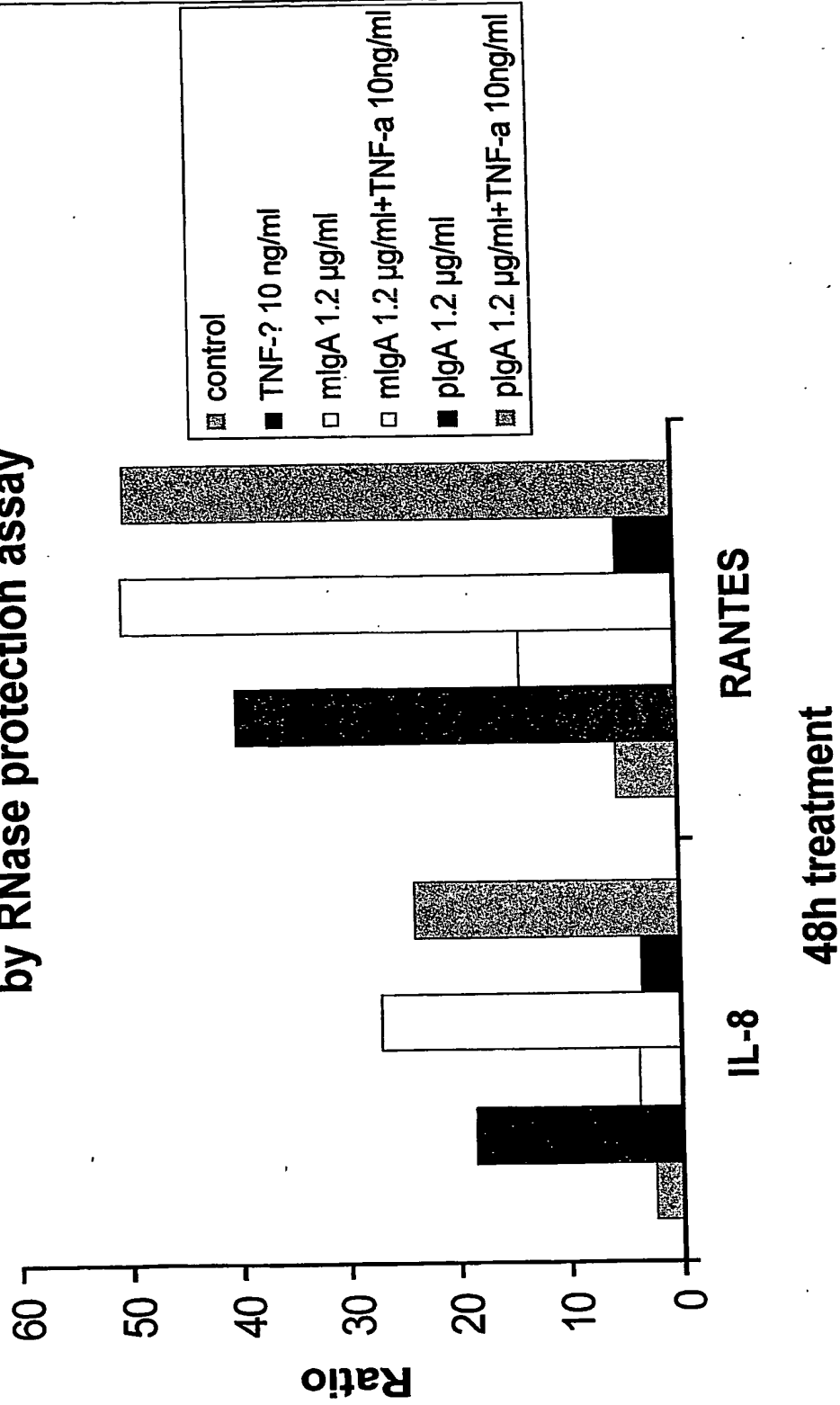
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Figure 5B – Complexes of antibody to IgA and IgA  
increase baseline ICAM-1 expression on  
RA synovial fibroblasts



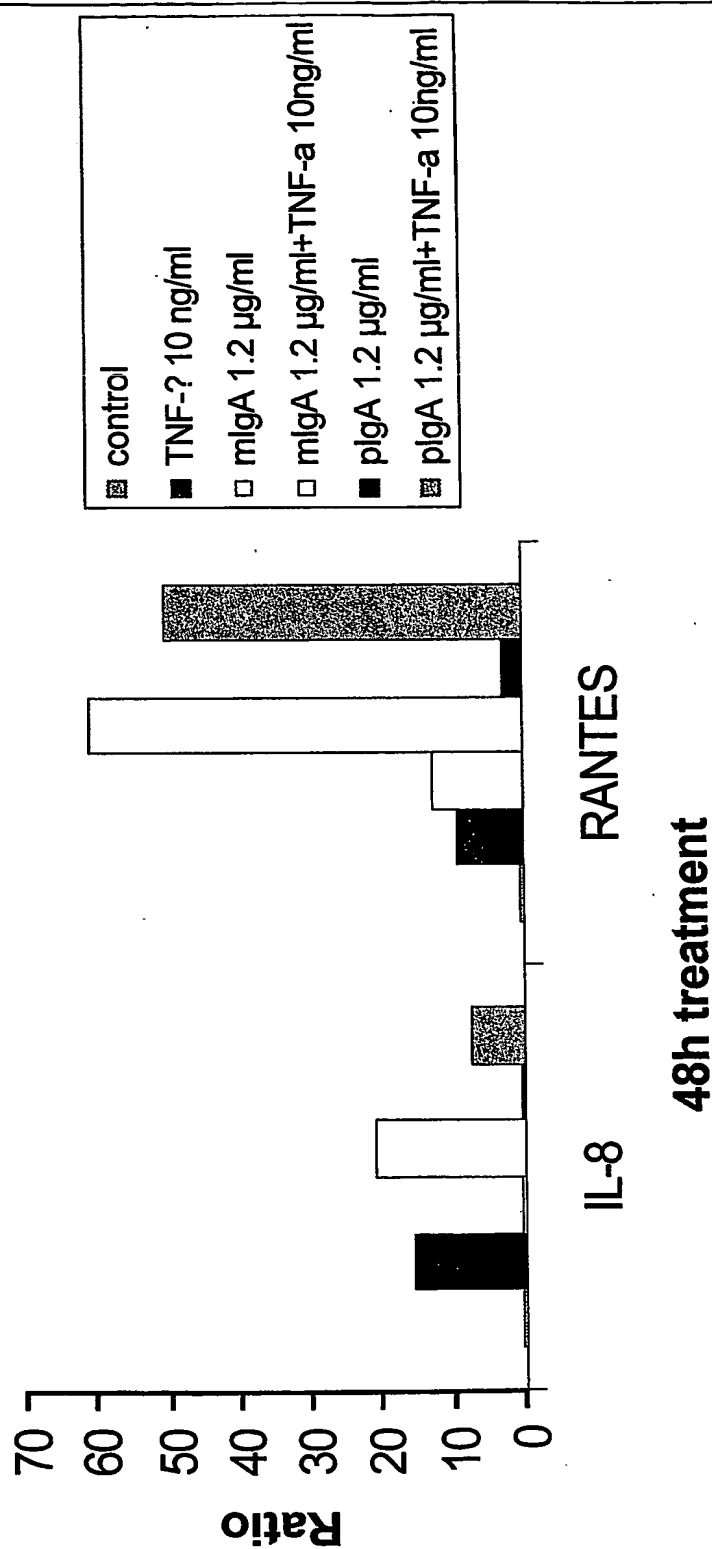
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**Figure 6 - IgA increases TNF $\alpha$ -induced IL-8 and RANTES gene expression in RA synovial fibroblasts by RNase protection assay**



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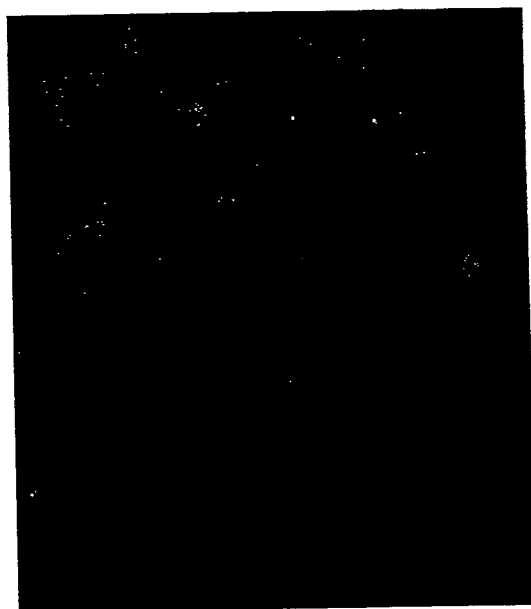
**Figure 7 - IgA increases TNFa-induced IL-8 and  
 RANTES gene expression in OA synovial fibroblasts  
 by RNase protection assay**





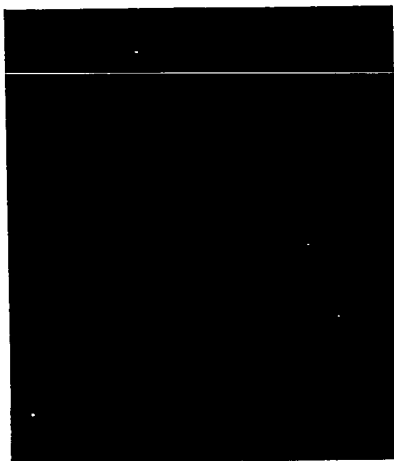
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Figure 8A - hpIgR expression in human ASM



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Figure 8B - Live cell uptake of pIgA by serum-starved ASM



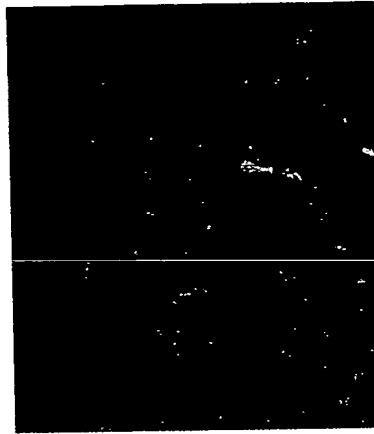
mIgA (12 µg/ml)



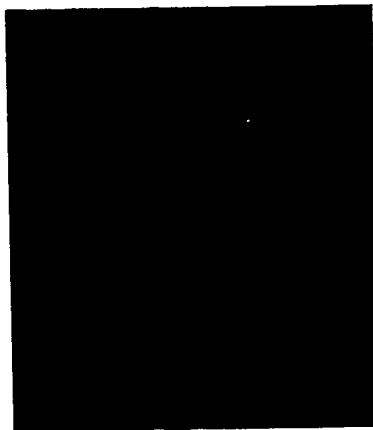
pIgA (0.12 µg/ml)

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Figure 8C - Live cell uptake of antibody to pIgR by serum-starved ASM



Rabbit antibody to SC

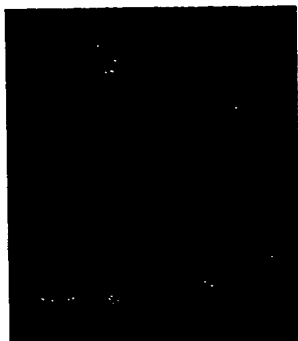


Irrelevant rabbit IgG



Serum-free media

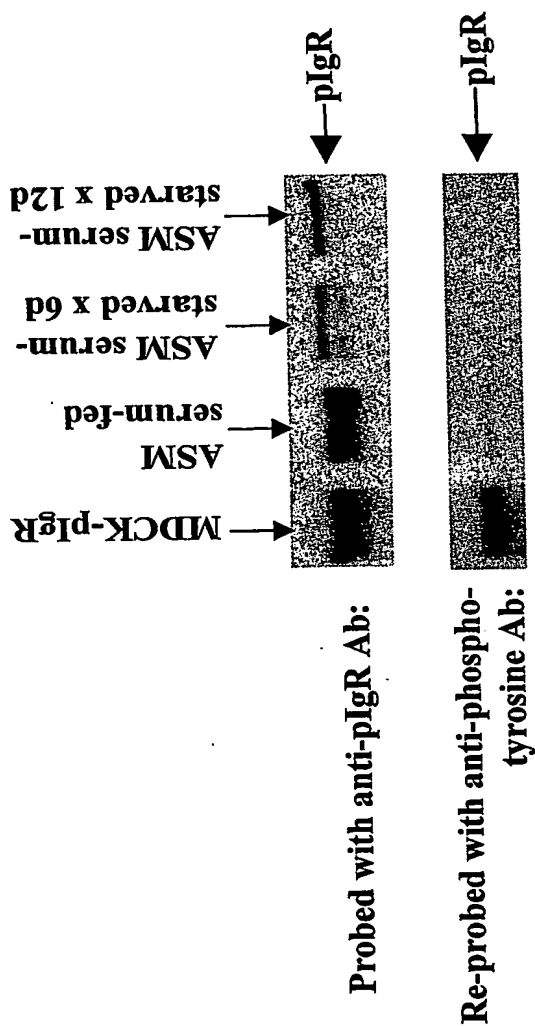
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**Figure 9 - FcαR expression in serum-fed human ASM**Pre-incubated with:- Media- pIgA (1.2 μg/ml)- mIgA (12 μg/ml)

Human ASM were pre-incubated with media alone, pIgA (1.2 μg/ml) or mIgA (12 μg/ml), before fixation and staining with mouse anti FcαR (CD89) and FITC-donkey anti-mouse IgG.

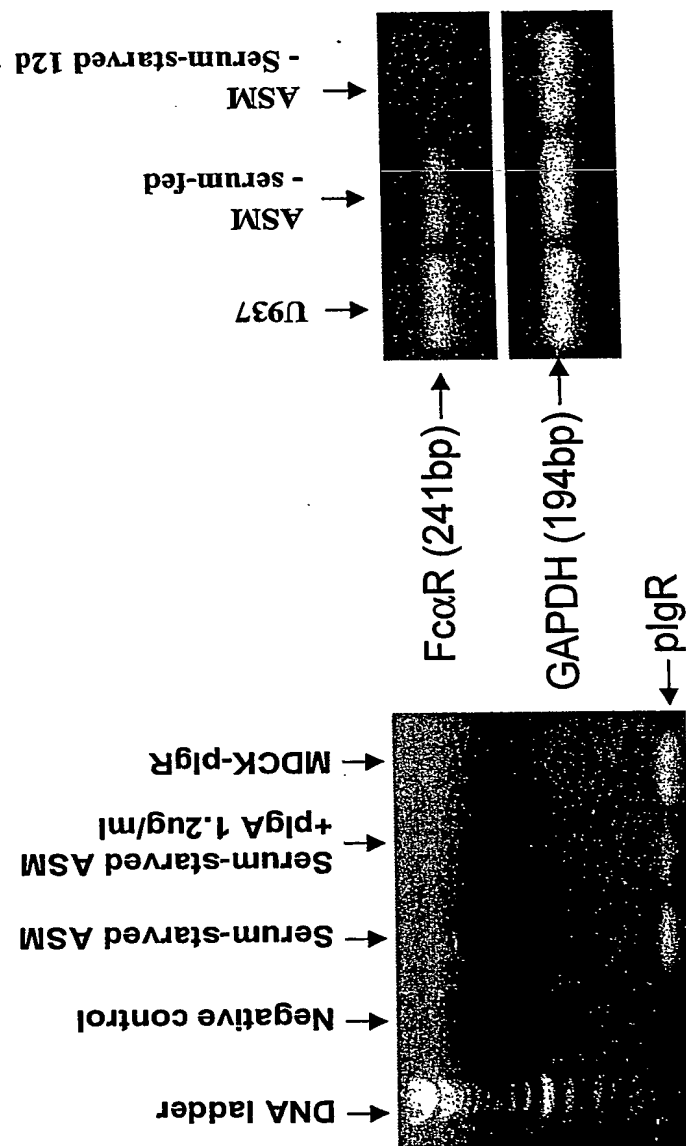
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**Figure 10 – Western blot for plgR in  
 ASM**



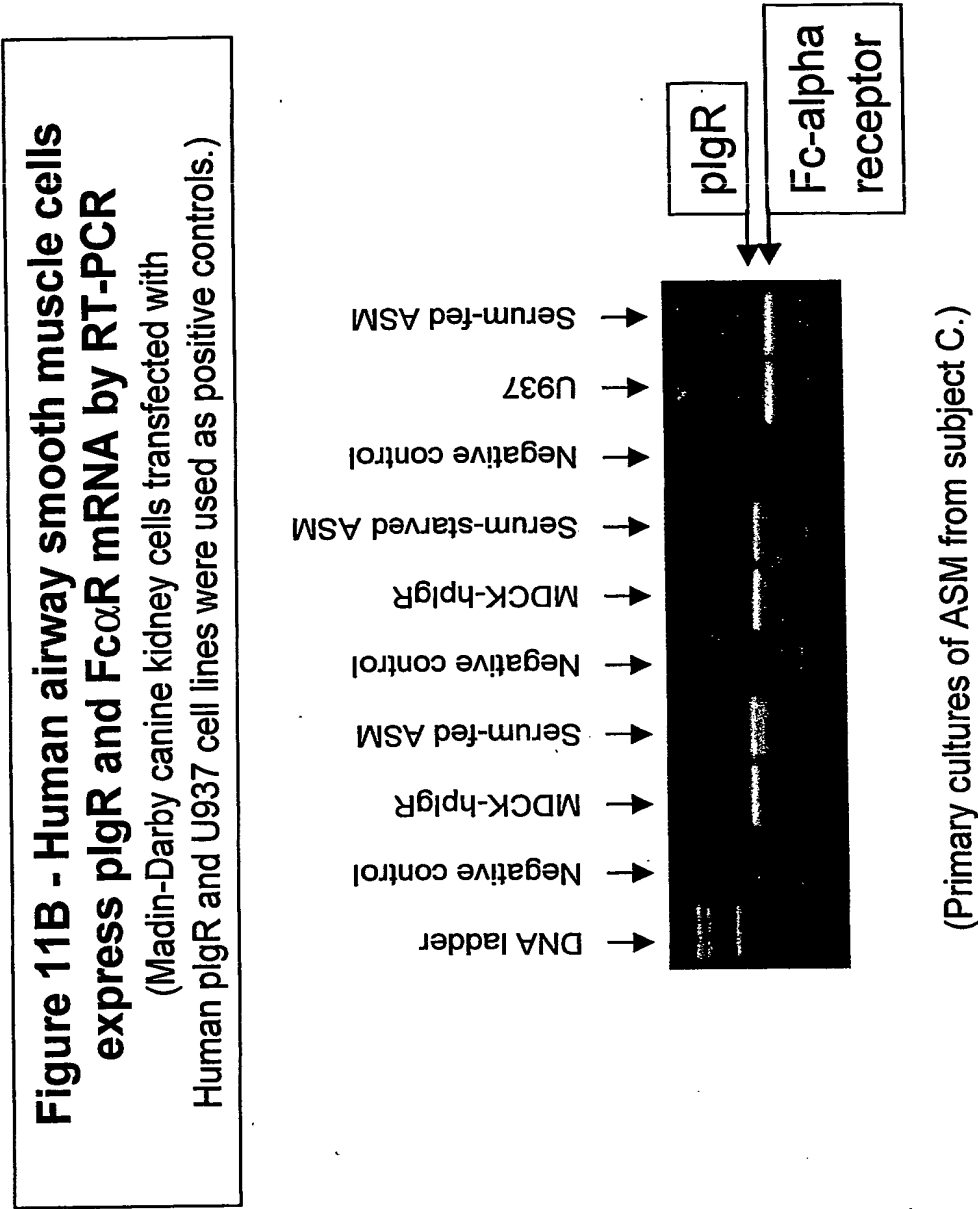
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**Figure 11A - Human airway smooth muscle cells  
express plgR and FcαR mRNA by RT-PCR**  
(Madin-Darby canine kidney cells transfected with  
human plgR and U937 cell lines were used as positive controls.)



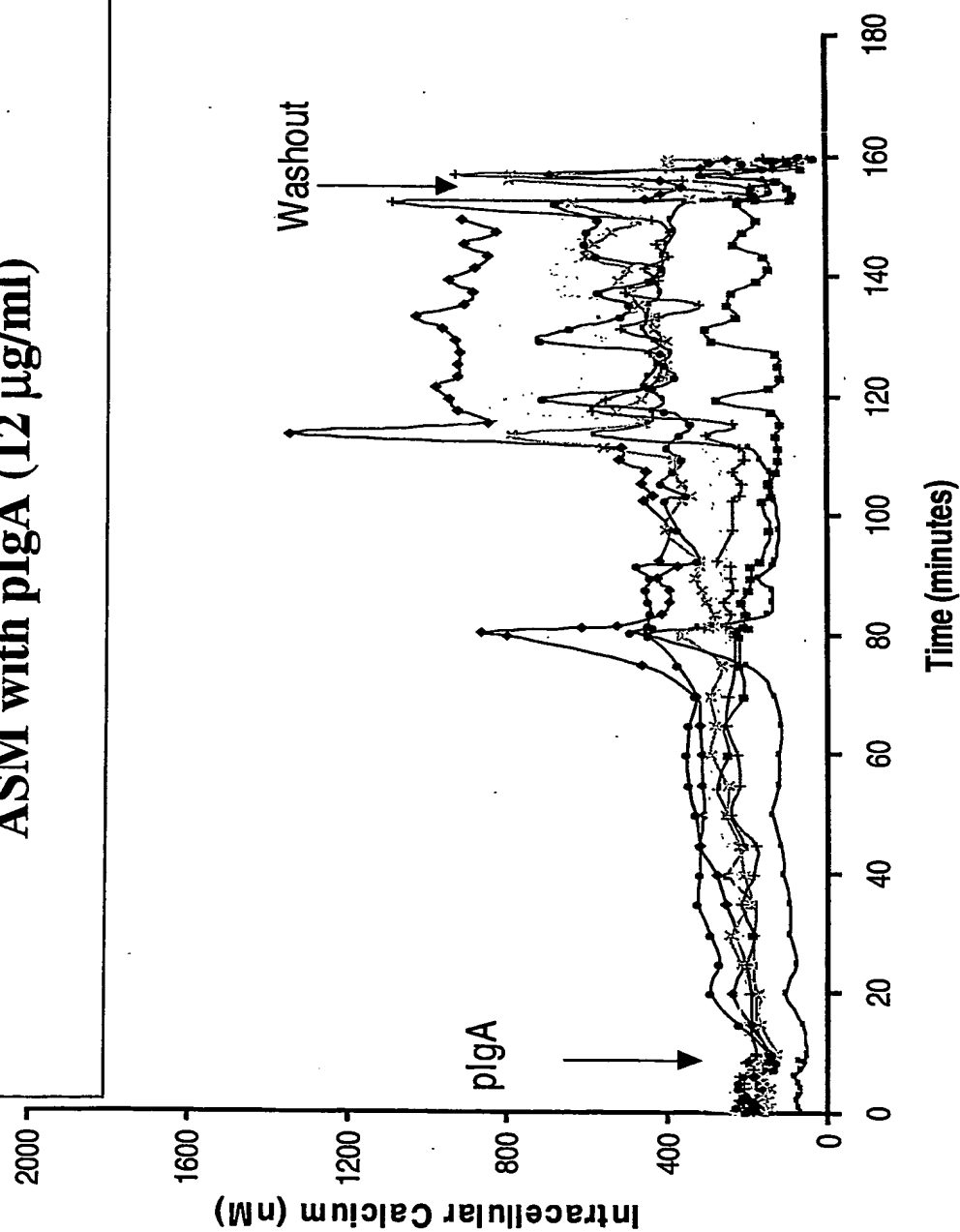
(Primary cultures of ASM from subject A.)

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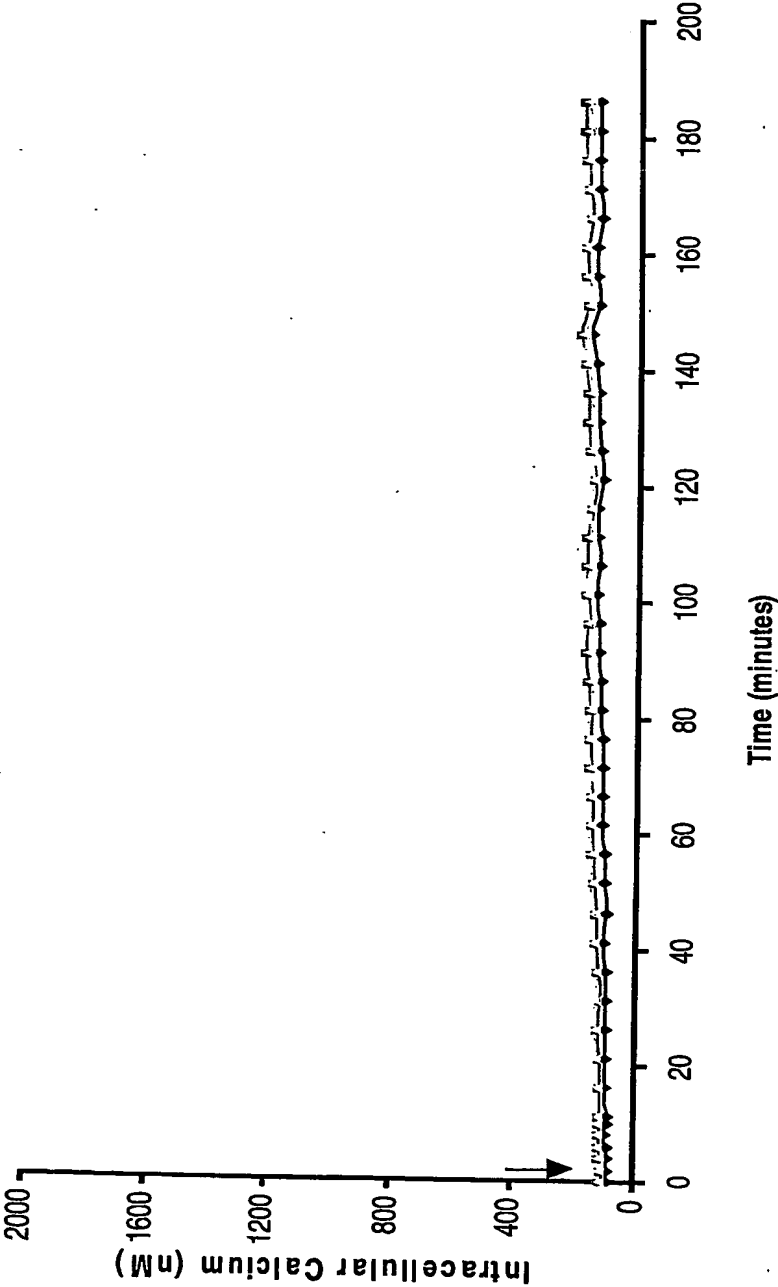
**Figure 12A – Fura-2-loaded serum-starved  
ASM with pIgA (12 µg/ml)**



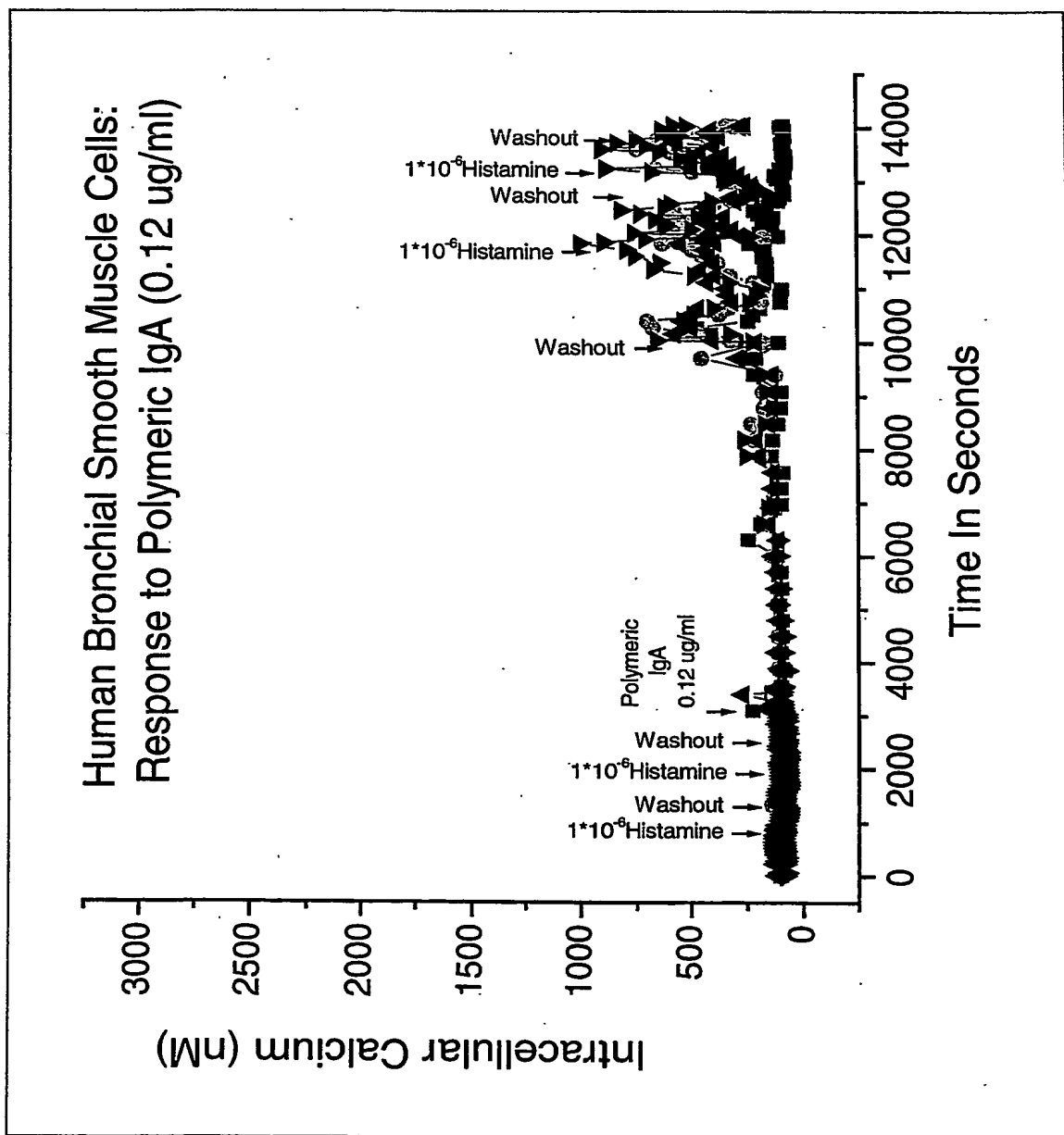


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Figure 12B – Fura-2-loaded serum-starved  
ASM with buffer alone

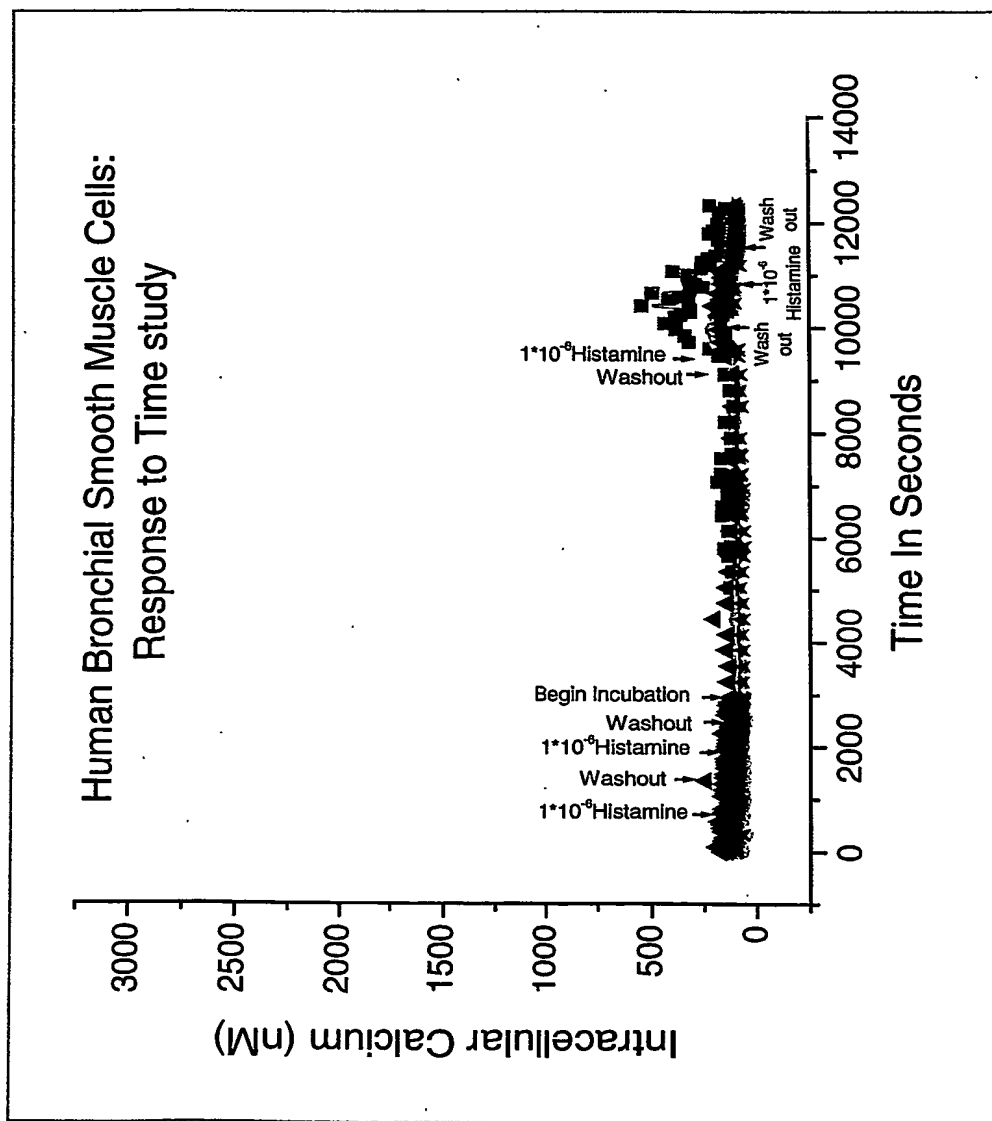


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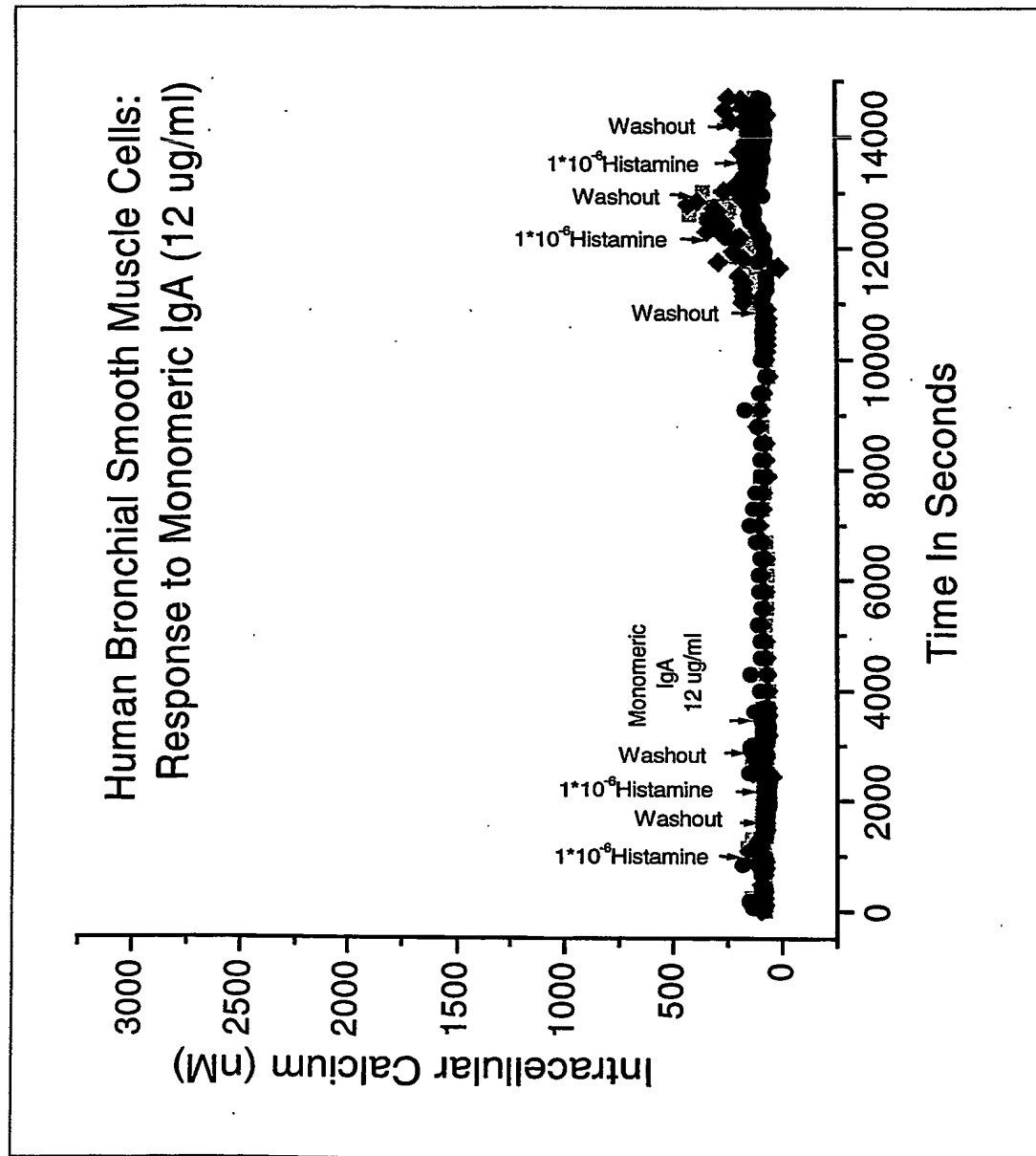
**Figure 13A – Histamine and low-dose pIgA**

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**Figure 13B – Histamine and buffer alone**

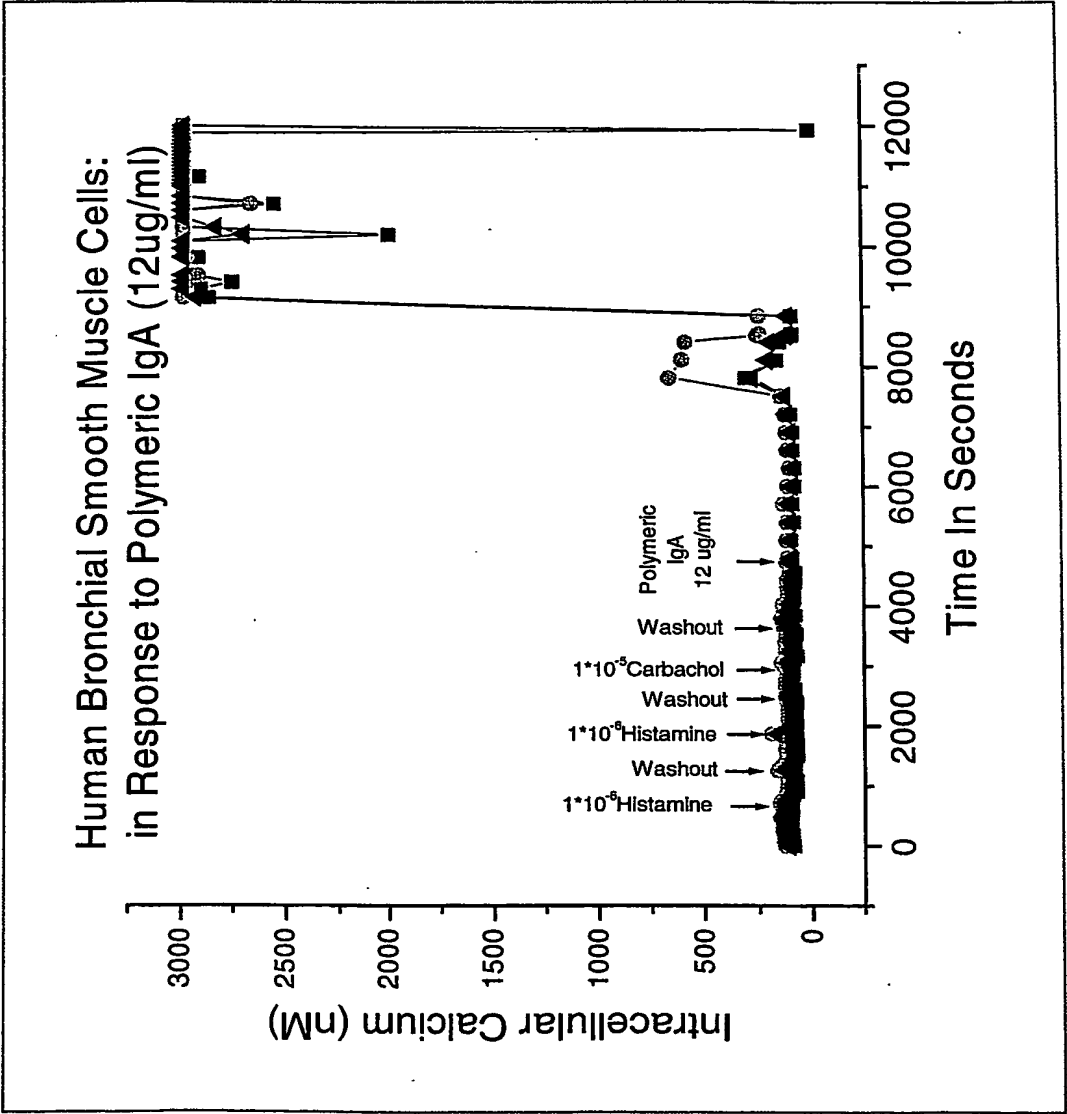


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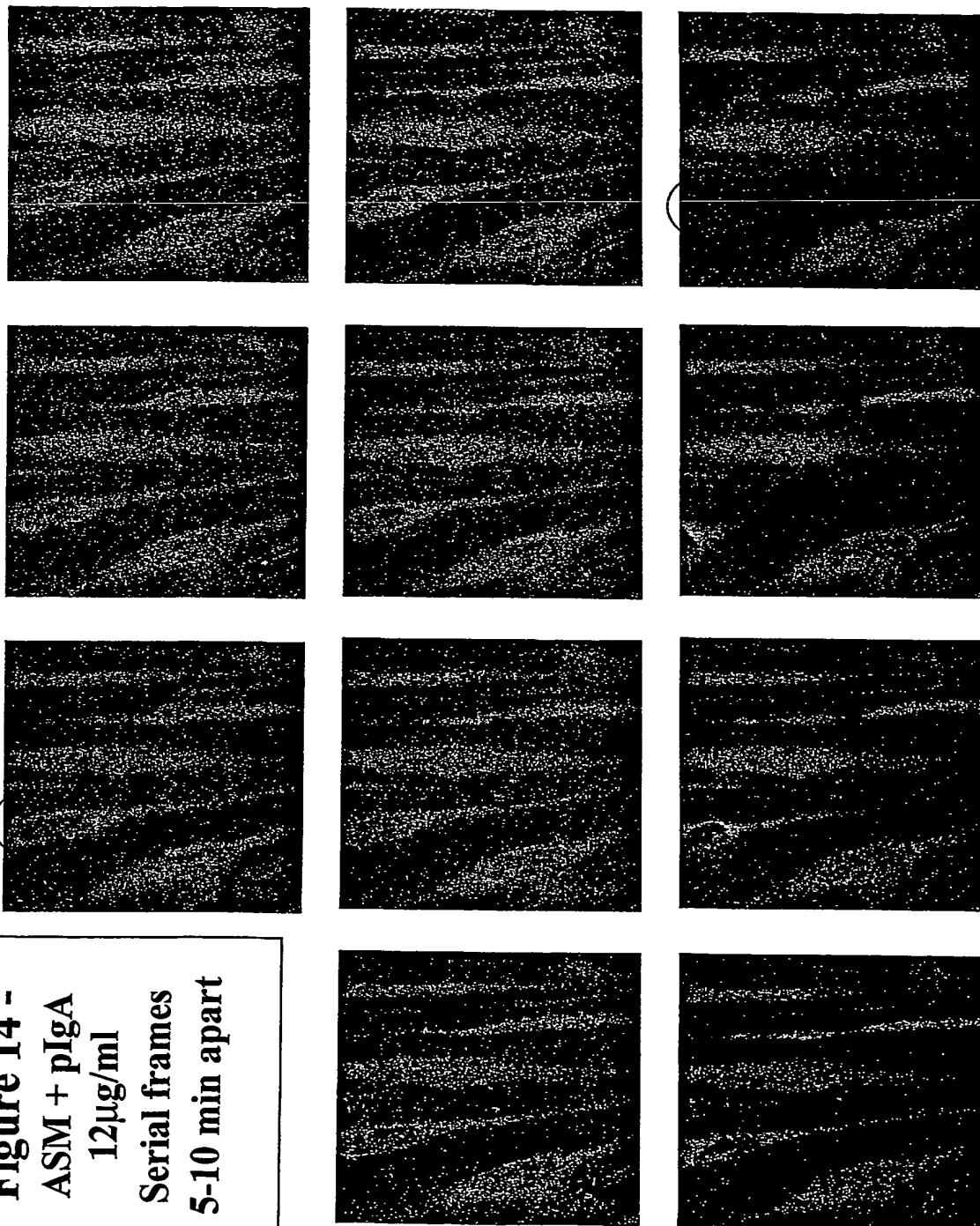
**Figure 13C – Histamine and mIgA**

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Figure 13D – Histamine and high-dose pIgA

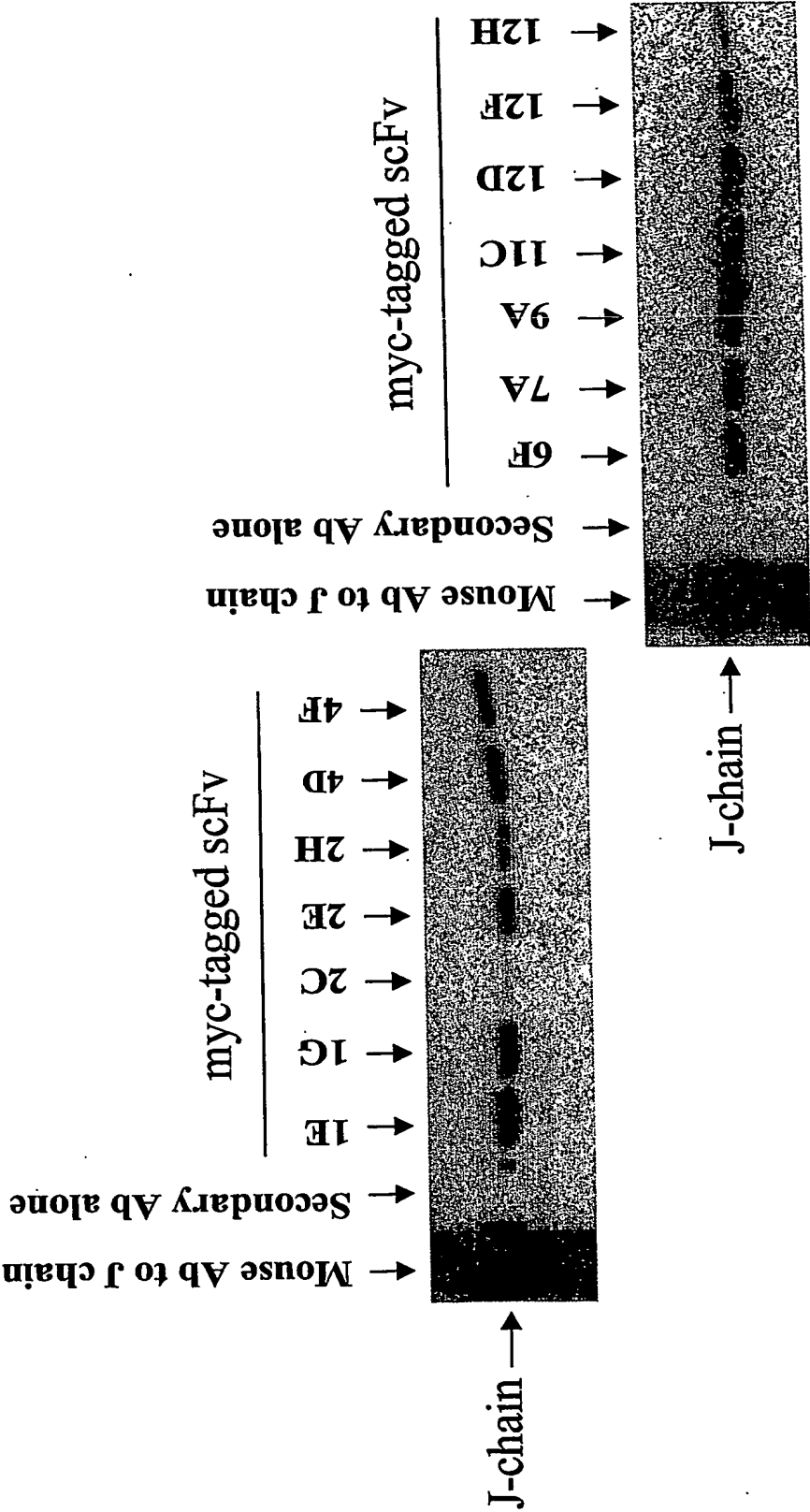


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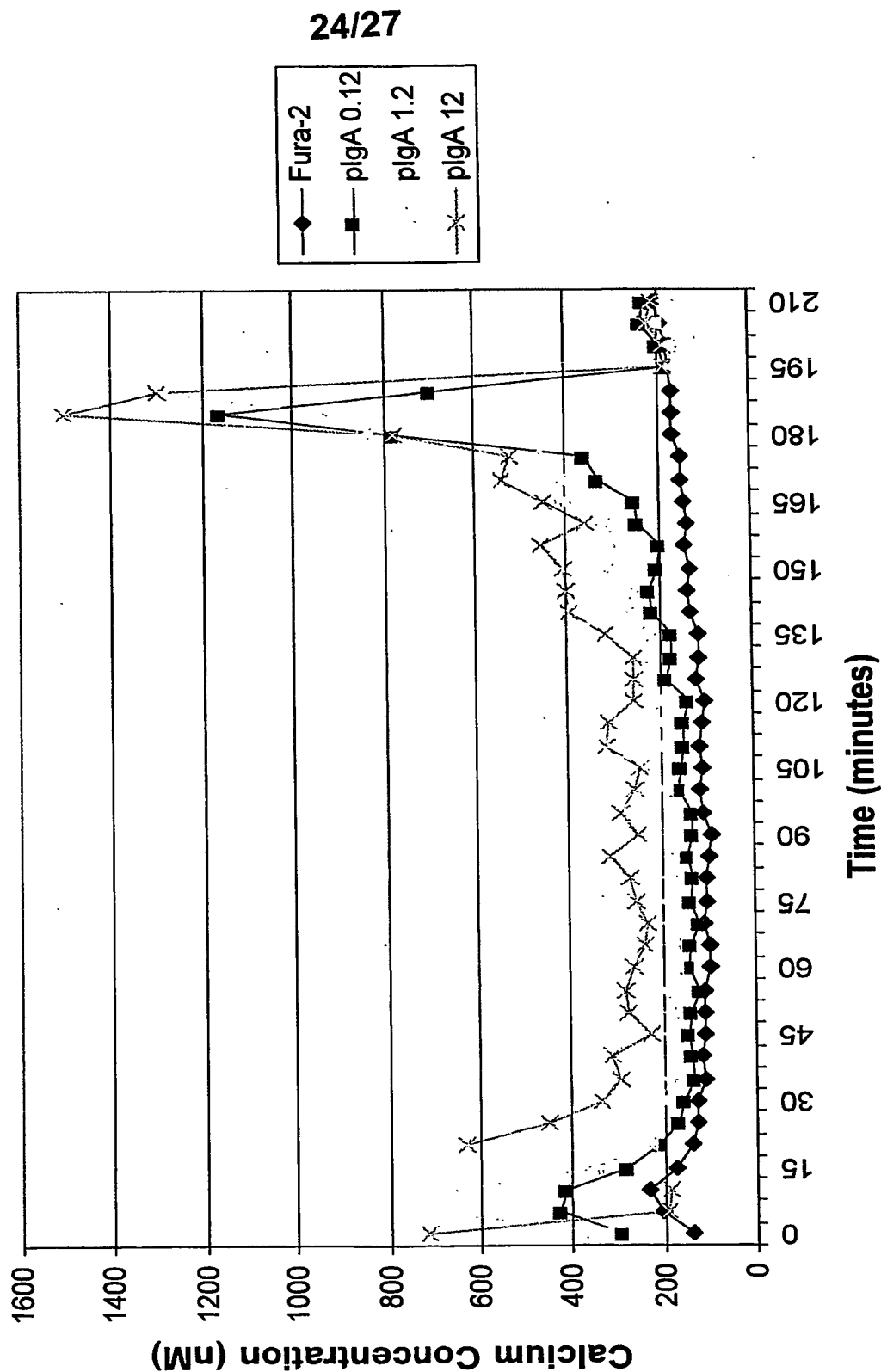


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Figure 15: Candidate scFv binders to J-chain recognize J-chain by western blot



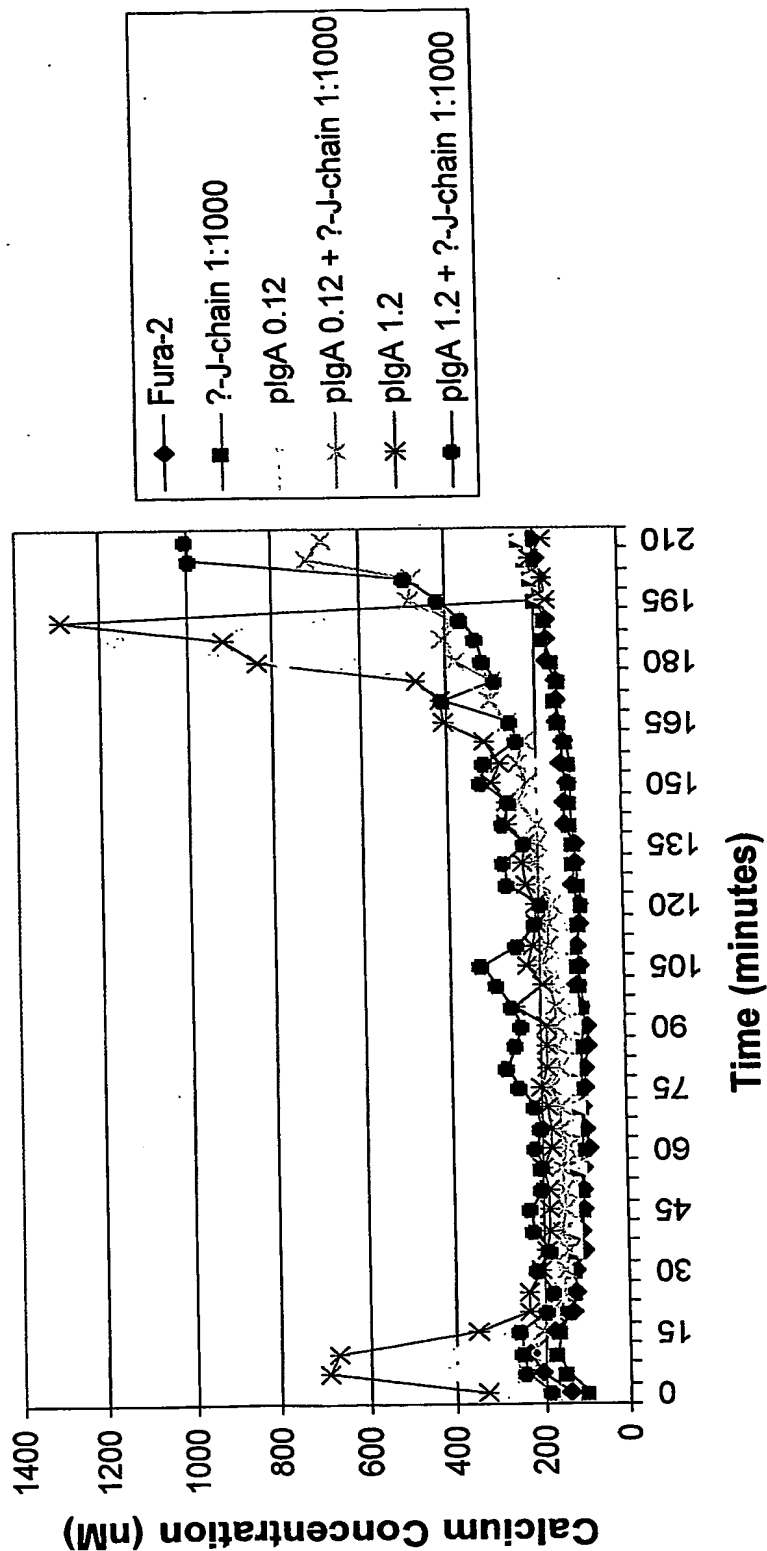
**Figure 16A - plgA increases cytosolic calcium in a dose-response manner in serum-starved ASM cells.**





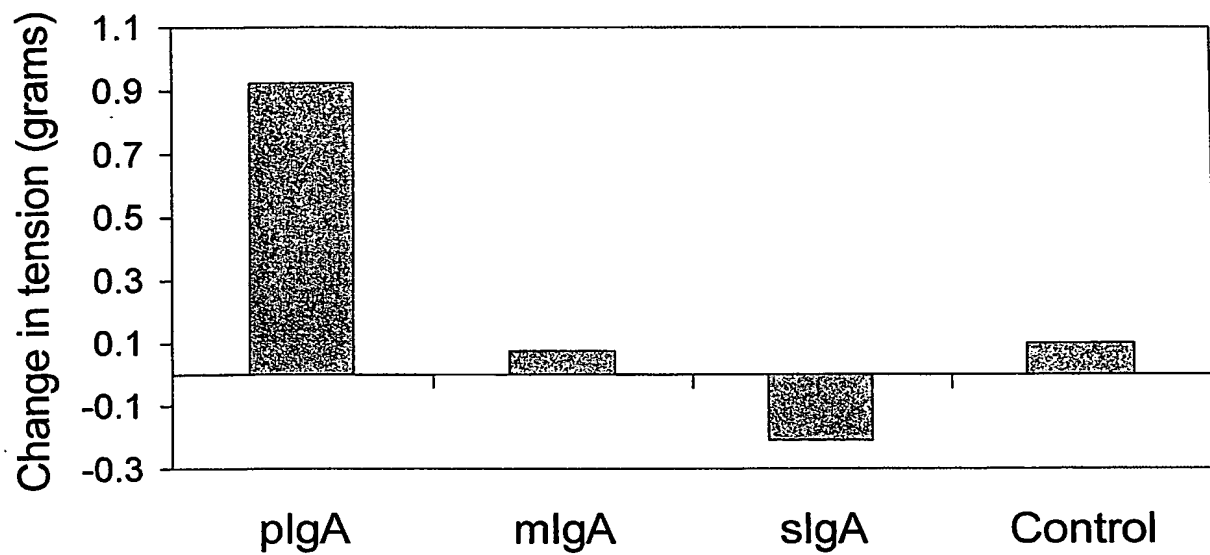
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**Figure 16B - Anti-J-chain IgG antibody reduces  
 IgA-induced increase in cytosolic calcium concentration  
 in serum-starved ASM cells.**



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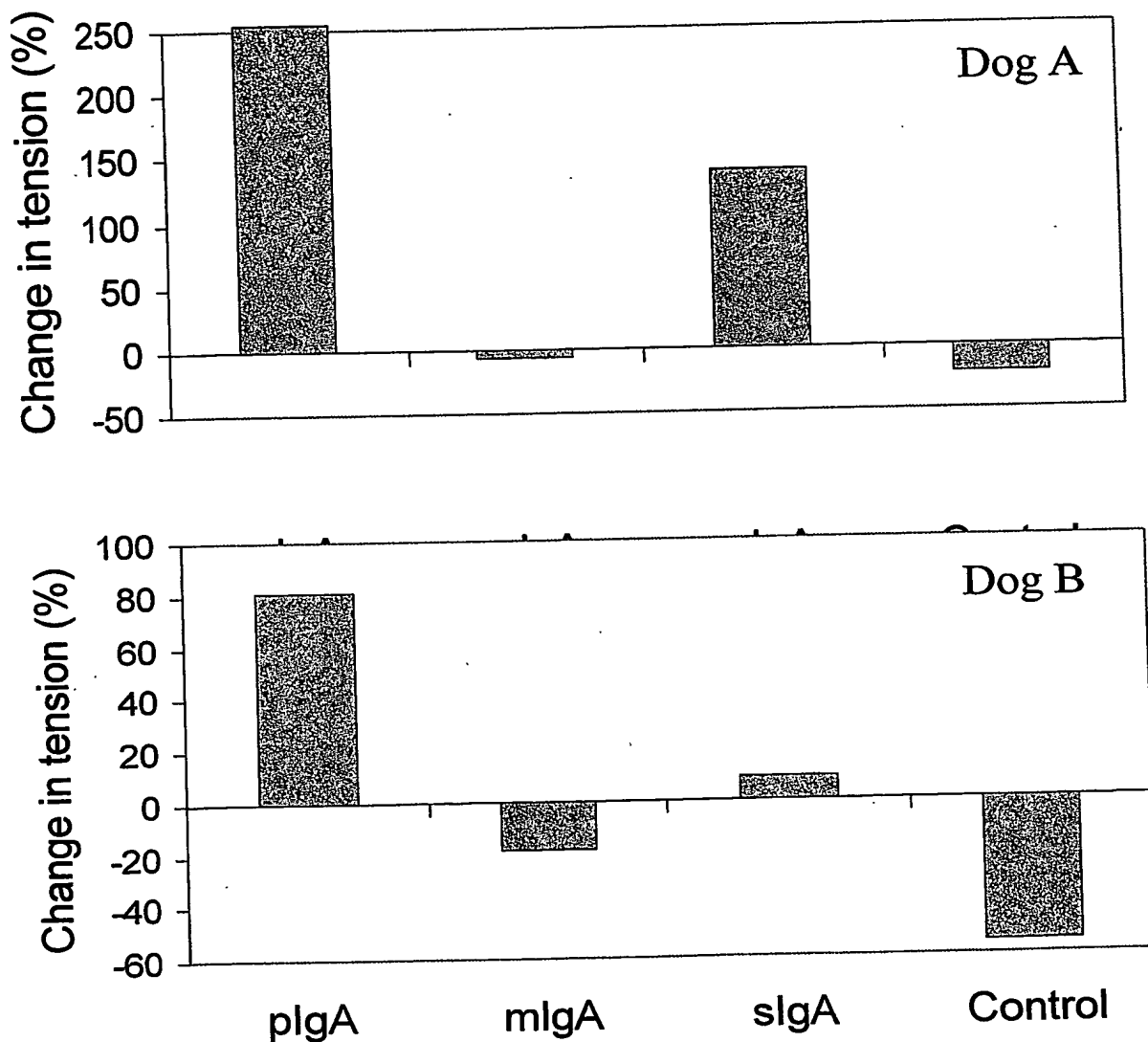
Figure 17 - pIgA increases tension in isolated dog tracheal smooth muscle strips



(Graph presents data recorded at 5.5h.)

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Figure 18 - pIgA enhances histamine-induced increases in tension in dog tracheal smooth muscle strips



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